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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,413	10/21/2003	Vincent Chow	3614/94	5940

7590 01/13/2005
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EXAMINER

MULLEN, KRISTEN DROESCH

ART UNIT	PAPER NUMBER
3762	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/690,413	Applicant(s) <i>CH</i> CHOW ET AL.	
	Examiner Kristen Mullen	Art Unit 3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/13/04 (response).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-11 and 16 is/are rejected.
- 7) ☒ Claim(s) 4, 12-15, 17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/21/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-3, 5-11, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Nisch et al. (6,298,270).

Regarding claim 1, Nisch et al. shows a method comprising converting light incident upon at least one photovoltaic element (34, 35) to generate the electrical stimulus at the retinal implant; converting light incident upon at least one additional photovoltaic element (30) to generate an additional electrical stimulus at the retinal implant, and providing gain to the electrical stimulus with the additional electrical stimulus to provide a modified electrical stimulus (41) (Col. 4, line 38-Col. 5, line 37; Fig. 2).

With respect to claim 7, Nisch et al. shows a method comprising: providing a retinal implant (13) comprising a first photovoltaic element (34, 35) and a second photovoltaic element (30), the second photovoltaic element being in electrical communication with the first photovoltaic element, generating an electrical stimulus in response to incident light received at the first photovoltaic element, and adjusting the electrical stimulus via the second photovoltaic element (Col. 4, line 38-Col. 5, line 37; Fig. 2).

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Regarding claims 2, and 8, Nisch et al. further shows applying the modified electrical stimulus to tissue adjacent the retinal implant (Fig. 1).

With respect to claim 3, Nisch et al. further shows converting a first wavelength portion (25') of the light incident upon the at least one photovoltaic element (30) and converting a second wavelength portion (21') of the light incident upon the at least one additional photovoltaic element (34, 35) (Fig. 2).

Regarding claim 5, Nisch et al. shows the first wavelength portion (25') and the second wavelength portion (21') are substantially different.

With respect to claims 6, and 16, Nisch et al. further shows the incident light is at least partially supplied by an external illumination system (Col. 5, lines 52-59),

Regarding claim 8, Nisch et al. further shows applying the adjusted electrical stimulus to at least a portion of a retina comprises passing a portion of the incident light (25') through the first photovoltaic element (34) and receiving the portion of incident light at the second photovoltaic element (30), wherein the second photovoltaic element adjusts the electrical stimulus in response to the portion of incident light (Col. 4, line 38-Col. 5, line 37; Fig. 2).

With respect to claim 10, Nisch et al. further shows generating the electrical stimulus comprises filtering out all but a predetermined wavelength range (21') of incident light at the first photovoltaic element (34, 35) and generating a voltage (41) in response to receipt of the predetermined wavelength range (Fig. 2).

Regarding claim 11, Nisch et al. further shows the predetermined wavelength range of incident light comprises a wavelength range of visible light (21') (Fig. 2).

Allowable Subject Matter

3. Claims 4, 12-15, and 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 4, the prior art of record fails to teach or suggest a method comprising converting a first wavelength portion of light incident upon at least one photovoltaic element to generate the electrical stimulus at the retinal implant; converting a second wavelength portion of light incident upon at least one additional photovoltaic element (30) to generate an additional electrical stimulus at the retinal implant, and providing gain to the electrical stimulus with the additional electrical stimulus to provide a modified electrical stimulus in combination with the first wavelength portion and the second wavelength portion are substantially identical. Nisch et al. particularly discloses that the converted wavelength of incident light at the at least one photovoltaic element (34, 35) is visible light and the converted wavelength of incident light at the at least one additional photovoltaic element (30) is infrared.

With respect to claim 12, the prior art of record fails to teach or suggest a method comprising providing a retinal implant comprising a first photovoltaic element and a second photovoltaic element, the second photovoltaic element being in electrical communication with the first photovoltaic element, generating an electrical stimulus in response to incident light received at the first photovoltaic element comprising filtering out all but a predetermined wavelength range of incident light at the first photovoltaic element and generating a voltage in response to receipt of the predetermined wavelength range, and adjusting the electrical stimulus via the second photovoltaic element all in combination with the predetermined wavelength range

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of incident light comprises a wavelength range of infrared light. Nisch et al. particularly discloses that the predetermined wavelength of incident light at the first photovoltaic element (34, 35) is visible light.

Regarding claims 13 and 15, the prior art of record fails to teach or suggest a method comprising providing a retinal implant comprising a first photovoltaic element and a second photovoltaic element, the second photovoltaic element being in electrical communication with the first photovoltaic element, generating an electrical stimulus in response to incident light received at the first photovoltaic element comprising filtering out all but a predetermined wavelength range of incident light at the first photovoltaic element and generating a voltage in response to receipt of the predetermined wavelength range, and adjusting the electrical stimulus via the second photovoltaic element all in combination with filtering out all but a predetermined wavelength range comprising filtering out all but a first portion of the predetermined wavelength range of incident light over a first region of the first photovoltaic element; filtering out all but a second portion of the predetermined wavelength range of incident light over a second region of the first photovoltaic element, generating a first voltage at the first region in response to receipt of the first portion of the predetermined wavelength range of incident light; and generating a second voltage at the second region in response to receipt of the second portion of the predetermined wavelength range of incident light.

With respect to claim 14, the prior art of record fails to teach or suggest a method comprising providing a retinal implant comprising a first photovoltaic element and a second photovoltaic element, the second photovoltaic element being in electrical communication with the first photovoltaic element, generating an electrical stimulus in response to incident light

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received at the first photovoltaic element, and adjusting the electrical stimulus via the second photovoltaic element, all in combination with adjusting the electrical stimulus by filtering out all but a portion of a wavelength range of incident light at the second photovoltaic element, and adjusting the electrical stimulus via the second photovoltaic element in response to receipt of the portion of the wavelength range of incident light at the second photovoltaic element. Nisch et al. does not teach filtering wavelengths at the second photovoltaic element (30).

Regarding claims 17-18, the prior art of record fails to teach or suggest a method comprising providing a retinal implant comprising a first photovoltaic element and a second photovoltaic element, the second photovoltaic element being in electrical communication with the first photovoltaic element, generating an electrical stimulus in response to incident light received at the first photovoltaic element, and adjusting the electrical stimulus via the second photovoltaic element in combination with varying a wavelength balance or intensity of the at least a portion of the incident light transmitted by the external illumination system upon at least one of the first and second photovoltaic elements.

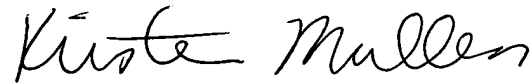
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristen Mullen whose telephone number is (571) 272-4944. The examiner can normally be reached on M-F, 10:30 am-6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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